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MOVEMENTS OF PALAEARCTIC RAPTORS IN THE ETHIOPIAN RIFT VALLEY

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Much information has been published in recent years on raptor migration at the Bosphorus, in northeastern Turkey, at Elat, the Gulf of Suez and elsewhere in the Near and Middle East. Less is known about the movements of the large proportion of these birds which winter in tropical or southern Africa.

From June 1974 until June 1975 (except for November and December 1974) I was based in Addis Ababa and was able to make fairly frequent visits to the Rift Valley which runs in a southwest-northeast direction from the Kenya border in the south to the Danakil Desert in the north, passing within 60 km of the Ethiopian capital at Mojo, on the Awash River.

Raptor movements were noted in autumn 1974 and spring 1975 from the west shore of Lake Langano. These observations are supplemented by records from the nearby Lakes Shalla, Abiata and Zwai, the Koka Dam area near Mojo, the Awash National Park, the environs of Addis Ababa and nearby localities on the Western Highlands, and from the inter-linking road system (Fig. 1).

The only published reports of raptor movements on any scale in the area come from Eritrea, to the north, where K.D. Smith (1960) reported that "Eagles in thousands, together with (Black) Kites, Buzzards and Lesser Kestrels pass regularly over the plateau in November, although Kites also appear earlier in September." Although these concentrations coincided with the arrival of desert locusts *Schistocerca gregaria* in the area, Smith considered that the raptor passage was true migration and not merely related to the abundant food supply. Urban & Brown (1971) described several of the Palaearctic raptors as common passage migrants but did not give any indication of the routes used.

MIGRATION AT LAKE LANGANO

Lake Langano lies at 7.35'N, 38.45'E and is the easternmost of a group of three lakes at an altitude of about 1580 m, 160 km due south of Addis Ababa. Observations were possible on eight dates in September (from 14th) and four in October (24th - 27th inclusive) in 1974 and on seven dates in March/April 1975. They were made from the top of a low (20 m) cliff fringing the western shore of the lake which commanded an unbroken view over the plain to the north

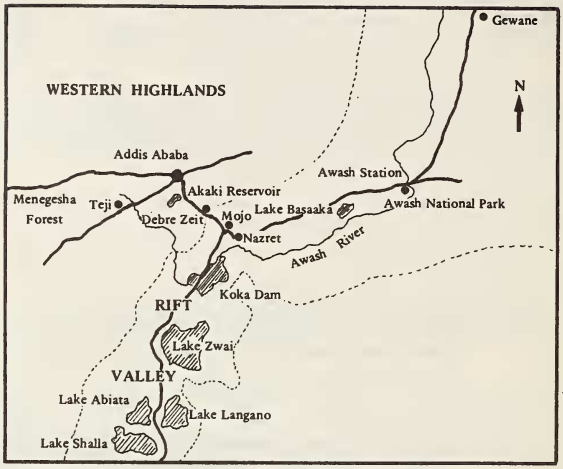

Fig. 1. *Map of the Rift Valley and Western Highlands, Ethiopia*

and the acacia woodland to the west and south. In autumn raptors would gain height over the plain before filing south over the narrow land bridge between Lakes Langano and Abiata.

Black Kites *Milvus migrans* and Steppe Buzzards *Buteo buteo vulpinus* accounted for almost 98 per cent of all Palaearctic raptors recorded in autumn (assuming the Black Kites were all of the race *migrans* - see Systematic List). Migration was less concentrated in spring but involved a greater variety of species. Most observed movement occurred in the late morning with much smaller numbers after midday, although the pattern was reversed on 29 September with the second largest of all recorded movements taking place in mid-afternoon after early morning rain. It was difficult to correlate movement with weather patterns. The largest movements occurred when there was a light headwind, but winds from the southwest quarter seemed to prevail in autumn and there was often little movement when conditions seemed to be ideal. This suggests that migration this far south along the route is very dependent on conditions further north. Passage was noted on both bright and overcast days. Rain becomes more infrequent as the autumn progresses and is unusual in spring.

The narrow land bridge between Lakes Langano and Abiata undoubtedly funnels birds of prey moving on a roughly north/south axis along the Rift Valley, but no observations were possible from the sides of the Rift to ascertain what proportion of raptors used this route. An indication of the relative importance of the Langano route may be the fact that it was also used as a flight line by unusually large numbers of the 'resident' raptors - mainly vultures and Tawny Eagles *Aquila rapax* - and also by migrating Marabous *Leptoptilos crumeniferus* and Abdim's Storks *Ciconia abdimii* in April 1975.

A summary of movement at Lake Langano in autumn 1974 is given in Table 1 while spring 1975 movement is in Table 2.

TABLE 1

Autumn movements at Lake Langano in 1974

			S e p t e m b e r					Oct
Date	14	15	21	22	26	27	28	29	27
Time	pm	11:30 13:00	pm	11:00 13:00	09:45 13:00	10:30 13:00	11:10 15:40	10:15 14:00	09:30 12:30
Pernis apivorus	-	-	1	5	-	-	4	10	-
Milvus migrans	2	38	5	600+	4	98	234	40	3
Gyps fulvus	-	-	-	-	-	-	-	-	2E
Accipiter nisus	-	-	-	-	1	-	-	-	-
Buteo b. vulpinus	-	1	-	180	1	106	192	35	4
Hieraaetus pennatus	-	-	1	1	1	2	2	2	-
Falco subbuteo	1	-	1	-	1	-	-	3	1
Falco peregrinus	-	-	1	-	-	-	-	-	-

All birds were moving S or SW unless stated. No movement was noted on 24, 25 or 26 October

TABLE 2

Spring movements at Lake Langano in 1975

	M a r c h			A p r i l			
Date	16	17	19	12	13	26	27
Time	08:50 12:30	09:00 12:00	am	09:30 10:30	09:50 11:10	10:00 12:15	09:15 11:15
Pernis apivorus	1	-	-	-	-	-	-
Milvus migrans	18	6	5	2	12	-	-
Circus macrourus	1	-	-	-	-	-	-
Circus pygargus	2	-	-	-	-	-	-
Accipiter brevipes	-	2	-	?1	-	-	-
Buteo b. vulpinus	8	1	-	-	11	1	1
Aquila pomarina	-	-	-	-	-	1W	-
Aquila nipalensis	15	8	-	2	-	-	-
Aquila heliaca	1	-	-	-	-	-	-
Hieraaetus pennatus	1	-	-	-	-	-	-
Falco naumanni	-	5	-	-	?1	-	-
Falco subbuteo	-	1	-	-	-	-	1
Falco vespertinus	-	-	-	-	-	1	-

All birds were moving N or NW unless stated

SYSTEMATIC LIST

The order and scientific nomenclature follow Voous (1973) except that the Steppe Eagle is accorded specific status under the name *Aquila nipalensis*.

Pernis apivorus Honey Buzzard
In September 1974 a total of 20 flew south at Lake Langano; on 29th, of the ten recorded, five were together. All were of the typical form and all passed through in the late morning or early afternoon. There were only three records of single birds in spring 1975: at Addis Ababa on 9 and 11 March (both flying north) and at Lake Langano on 16 March (flying northwest).

Urban & Brown (1971) knew of no recent occurrences of this species in the country and questioned the validity of earlier records.

Milvus migrans Black Kite
The race *parasitus* is resident in central and southern Ethiopia while *aegyptius* largely replaces it in the northeast. The numbers of local Black Kites are supplemented by wintering *migrans* from September to May. Many *migrans* winter further south in Africa and undoubtedly account for the vast majority of the birds passing through the Langano area. Not all migrants were positively identified as *migrans* and the possibility of local movements of *parasitus* and/or *aegyptius* must also be borne in mind, although rains-associated movements of these races would be expected to take place in May/June and November/December.

In autumn 1974, a total of 1024 flew south at Lake Langano on nine dates between 14 and 29 September with maxima of 600 in two hours (11:00 - 13:00) on 22nd and 234 on 28th, 215 of which passed through in 25 minutes from 15:15. Passage seemed to have virtually stopped by late October since, during the period 24th - 27th the only evidence of movement was of three flying south during a two-hour watch on 27th. In spring 1975 a total of 29 flew north between 16 and 19 March and then 14 on 12-13 April.

Urban & Brown (1971) were uncertain about the relative status of the three races in Ethiopia. Smith (1957, 1960) regarded *migrans* as a common migrant in Eritrea in both spring and autumn, when passage was noted in both September and November. Ebbels (1973) reported large movements further south in the Rift Valley in Tanzania in October.

Neophron percnopterus Egyptian Vulture
A breeding resident in the Rift Valley. Palaearctic migrants would be impossible to distinguish from local birds, but there was no discernible increase in numbers in autumn 1974 or spring 1975. The only possible evidence of migration was of two adults flying south over Lake Langano on 22 September 1974.

Gyps fulvus Griffon Vulture
Two adults circled high over Lake Langano on 27 October 1974 before drifting off to the east.

Although Urban & Brown (1971) described the species as an uncommon passage migrant in the Western Highlands and northeast Ethiopia, Moreau (1972) pointed out that Sudanese and not Palaearctic breeding birds are most likely to be involved. The above record nevertheless represents the most southerly occurrence in the Rift Valley.

Circaetus gallicus Short-toed Eagle
Only two records of single birds in autumn 1974: at Koka on 20 October and Lake Langano on 25 October. One at Lake Langano on 20 January 1975 was the only winter record. In spring 1975 one was seen south of Koka on 13 April and a late bird was over Addis Ababa on 6 June.

Urban & Brown (1971) regarded the species as an uncommon passage migrant

from October to March. The last of the above records suggests that, as in West Africa, some birds remain in the tropics during the summer.

Circus aeruginosus Marsh Harrier
Small numbers were seen at suitable localities in the Highlands and the Rift Valley between early October 1974 and late March 1975, but there was no evidence of passage through the Lake Langano area.

Circus macrourus Pallid Harrier
In autumn 1974 this species was positively identified at Lake Langano on 24, 25 and 27 October (one or two males and one female). In 1975, males were seen at several localities in January, February and March. For discussion and records of unidentified 'ringtails' see *Circus macrourus/pygargus* below.

Circus pygargus Montagu's Harrier
In 1974 two males were seen south of Mojo on 24 October. In 1975 three single males were seen in January and there were several near Teji, southwest of Addis Ababa, on 1 and 2 March. One over Addis on 10 March was an obvious migrant, reflecting a marked passage in the Rift Valley where 14 *Circus* spp. south of Mojo on 15 March included three male Montagu's. Two males flew north at Lake Langano on 16 March, there was one at Akaki Reservoir on 23 March and two in the Awash National Park on 28 March.

Circus macrourus/pygargus Pallid/Montagu's Harrier
In autumn 1974 'ringtail' harriers were recorded in small numbers (up to four) from 25 September to 27 October. Numbers of both species were higher in spring 1975, with a combined total of 14 south of Mojo on 15 March being the highest count. It was last recorded on 13 April.

Urban & Brown (1971) regarded both species as fairly common passage migrants between October and March, but uncommon outside this period. There seemed to be no appreciable difference in their relative abundance.

Accipiter nisus Eurasian Sparrowhawk
One circled high over Lake Langano before moving off to the south on 26 September 1974 and one, of this species or the next, flew north there on 12 April 1975.

Small numbers of the Eurasian Sparrowhawk are known to reach East Africa in winter (Britton 1980) but Urban & Brown (1971) were uncertain about its status in Ethiopia.

Accipiter brevipes Levant Sparrowhawk
Two males flew north over Lake Langano on 17 March 1975; see also a possible record under *A. nisus*.

The status of the species in Ethiopia is obscure, but it is likely that the main wintering areas in Africa are well to the west of the Rift Valley. Flocks of migrating *Accipiter* spp. were seen in the Nile Valley in northern Sudan in September (Christensen 1960).

Buteo buteo Common Buzzard
All the birds seen showed the characteristics of the Steppe Buzzard *B. b. vulpinus*. In September 1974 a total of 515 flew south at Lake Langano on six dates between 15th and 29th with maxima of 180 on 22nd and 192 on 28th. Singles were seen over Addis Ababa on 3 and 15 October and four flew south at Lake Langano on 27 October. In spring 1975, one was seen west of Addis on 9 March while at Lake Langano a total of nine flew north on 16 and 17 March, 11 flew north on 13 April and singles were seen flying in the same direction there on 26 and 27 April. The species was often associated with other raptors, mainly Black Kites. The most concentrated passage was of 174 in 25 minutes from 15:15 on 28 September (cf. Black Kite). Otherwise most passed in the

late morning, although a watch beginning at 10:25 on 29 September caught the tail-end of a movement of unknown dimensions.

The numbers passing through the Lake Langano area represent only a small fraction of the birds wintering in eastern and southern Africa and it seems likely that the majority follow the Nile route further west. Moreau (1972) speculated that, in view of the numbers of *vulpinus* taken in Arabia an important passage across the Bab el Mandeb is probable. Smith (1960) referred to passage across the Eritrean plateau in November but, as wintering populations are well established in southern Africa by this time, these birds may stay in the northern tropics.

Buteo rufinus Long-legged Buzzard
The only record was of one south of Mojo on 15 March 1975.

Brown *et al.* (1982) show the main wintering areas in eastern Africa as in Sudan and Ethiopia but there seem to be few definitive records and Urban & Brown (1971) considered the species to be uncommon in Ethiopia.

Aquila pomarina Lesser Spotted Eagle
None seen in autumn at Lake Langano but two spring records in 1975: an immature at Koka Dam on 19 March and an adult flying west at Lake Langano on 26 April.

Smith (1960) saw thousands of "Spotted Eagles" (*A. pomarina/clanga*) in Eritrea in November and Urban & Brown (1971) referred to birds thought to hav been of this species migrating in the lower Omo valley in southwest Ethiopia, presumably in autumn.

Aquila clanga Greater Spotted Eagle
None was seen at Lake Langano. The only records were of single immatures north of Zwai on 18 January and near Nazret on 28 March 1975.

Urban & Brown (1971) regarded the species as a "frequent to common passage migrant" in the Western Highlands but admitted that its status was obscured by the possibility of confusion with other similar species.

Aquila nipalensis Steppe Eagle
None was identified at Lake Langano in autumn 1974. The main arrival was presumably in November (when I was absent from the country) since it was not uncommon on my return in January in parties of up to six in both the Western Highlands and the Rift Valley. An adult was seen displaying at Koka Dam on 23 February 1975. In spring 1975 at Lake Langano, a total of 23 flew north on 16 and 17 March. Thereafter, it was seen on only four occasions: over Addis Ababa on 21 March, in the Awash National Park on 30 March, two at Lake Langano on 12 April (eight eagles flying north there on the next day were considered to have been the 'resident' race of the Tawny Eagle *A. rapax raptor*) and a late bird near Gewane on 5 May.

Urban & Brown (1971) considered the species to be a common passage migrant between October and April. As many winter further south in East Africa, there must be a considerable movement through Ethiopia in autumn, possibly along the western river systems. Moreau (1972) suspected that some must enter Africa via southwest Arabia (Bab el Mandeb) but there is still no firm evidence to support this.

Aquila heliaca Imperial Eagle
Three records of single birds: an immature at Lake Langano on 25 October 1974 (which was photographed), an adult at Lake Shalla on 22 January 1975 and an immature flying north at Lake Langano on 16 March 1975.

The species is known to occur sparingly in winter in northeastern Africa, although Urban & Brown (1971) knew of no recent records from Ethiopia.

Hieraaetus pennatus Booted Eagle
At Lake Langano in September 1974 a total of nine flew south (seven adults, one sub-adult and one immature) on six dates between 21st and 29th. In spring 1975 adults flew north there on 16 March and over Addis Ababa on 19 April.

Urban & Brown (1971) described the species as a passage migrant of uncertain status. It is known to winter widely but thinly throughout eastern and southern Africa.

Pandion haliaetus Osprey
Rather surprisingly there were only four records: in autumn 1974 single birds were seen at Lake Basaaka on 8 September and Lake Langano on 15 September. In spring 1975 there were singles at Lake Basaaka on 30 March and Lake Shalla on 12 April.

The species was described as a resident in the Dahlak Islands in the Red Sea by Urban & Brown (1971). Ash (1981) gave a ringing recovery of a Finnish bird further south in Tigre.

Falco naumanni Lesser Kestrel
None was seen at Lake Langano in autumn 1974. In 1975 the first to be positively identified were two east of Debre Zeit on 18 January, followed by a marked passage through the Western Highlands and Rift Valley lasting until 5 May. Maxima were 20+ at Debre Zeit on 9 February, 100+ at Teji on 2 March, 30 at Debre Zeit on 19 March and at Akaki Reservoir on 23 March, 50+ in the Awash National Park between 28 and 30 March and 30 south of Mojo on 13 April. At Lake Langano five flew north on 17 March.

Urban & Brown (1971) described the species as a "common to abundant passage migrant" from October to May. Smith (1957, 1960) noted movement through Eritrea in October and November and it is probable that the main arrivals in the Addis Ababa area and the Rift Valley occurred during my absence in November. The above records nevertheless support the conclusions of Cramp & Simmons (1980) that the spring passage is more conspicuous and protracted, lasting from January until May.

Falco tinnunculus Kestrel
Migrants were difficult to separate from the resident race *rufescens*, although the species was undoubtedly commoner from September to March in the Western Highlands and the Rift Valley. There was no evidence of movement at Lake Langano, but a male of the distinctive Egyptian race *rupicolaeformis* flew north at Lake Abiata on 18 March 1975. This race is known to straggle to northeastern Africa (Moreau 1972) but there are no published records from Ethiopia.

Urban & Brown (1971) regarded the nominate race as a "common to abundant passage migrant, September - April."

Falco vespertinus Red-footed Falcon
Only one record, of a male which flew north at Lake Langano on 26 April 1975.

There are few records of this species in East Africa (Britton 1980). Urban & Brown (1971) listed it as a passage migrant of uncertain status in Western Ethiopia (September/October and March/April) and referred to migration in association with Kestrels. It seems probable that the main migration route lies well to the west of the Rift Valley.

Falco subbuteo Hobby
Recorded in autumn and spring but only at Lake Langano (see Tables 1 and 2).

Urban & Brown (1971) regarded the species as a locally abundant passage migrant (October and March/April), with the spring movement mainly affecting eastern Ethiopia.

Falco peregrinus Peregrine Falcon
In September 1974 singles were seen near Menegesha on 11th and at Lake Langano (flying south) on 21st. Both were considered to be of the Palaearctic race *calidus*.

Urban & Brown (1971) regarded the Palaearctic nominate race as an uncommon passage migrant between October and March; they did not record *calidus* but noted that it might occur.

Falco spp.
Five other species of migratory falcons are listed by Urban & Brown (1971). The Eastern Red-footed Falcon *F. amurensis* was considered by them to be a possible passage migrant in the northeast of the country. Eleonora's Falcon *F. eleonorae* and the Sooty Falcon *F. concolor* seem to be exclusively coastal in this part of Africa. The Saker Falcon *F. cherrug* is described as a frequent visitor, mainly in wetland areas, and might therefore be expected to occur at the Rift Valley lakes in winter. Finally, these authors record the Barbary Falcon *F. pelegrinoides* as an uncommon Palaearctic migrant.

CONCLUSIONS

From the limited observations at Lake Langano, it is reasonable to assume that well in excess of 10 000 Palaearctic raptors pass south along this part of the Rift Valley in September and October, the vast majority of which are Black Kites and Steppe Buzzards. Numbers would appear to be much smaller in spring, suggesting that an alternative route is used. Even the autumn Kite and Buzzard numbers are only a small fraction of the migrants reaching eastern and southern Africa and the absence or scarcity of several other species wintering south of Ethiopia indicates that most birds use other routes, of which the Nile and the river systems of Western Ethiopia are the most obvious.

It is likely that many of the birds of prey at Lake Langano in autumn have either travelled south from Eritrea, possibly following the eastern escarpments of the Western Highlands, or have entered Ethiopia in the northeast after crossing the Straits of Bab el Mandeb, adding weight to the few published observations (e.g. Tuck 1965) supporting the theory that numbers of large raptors cross into Africa from southwest Arabia.

Comparative studies from the sides of the Rift Valley are necessary to determine more accurately the volume of passage, but random observations by the author and other observers in recent years have not given any indication of the presence of another major route in this part of Ethiopia.

SUMMARY

Observations in autumn 1974 and spring 1975 revealed a passage of Palaearctic raptors over the land bridge between Lakes Langano and Abiata. The species involved in autumn were mainly Black Kites and Steppe Buzzards. Spring passage was less concentrated but involved a greater variety of species. Several species, for which there are no previous or recent Ethiopian records, were seen.

The Lake Langano observations are supplemented by data from other localities in the Rift Valley and the adjacent Western Highlands, and are related to published information on Ethiopia and neighbouring countries.

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CORRECTION

In the list of contents on the back cover of *Scopus* 6 (4), December 1982, S.W. Sikombe's name was omitted as co-author (with D.C. Moyer) of the Short Communication 'A breeding record of the White-rumped Babbler *Turdoides leucopygius* from Tanzania'; we are sorry about this mistake.

Ed.